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On the Preconditions for Intervention in Systems Design

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Abstract

I am currently participating in a project at the University of Oslo aimed at introducing an extension of the publication registration system, which supports research ethics. The current system allows researchers to register their publications, and administrators to count them. The number of publications is the basis for a part of the funding to the University and internally in the University. A couple of scandals concerned with fake data and fake co-authorship have triggered a wish to bring the ethical awareness more to the foreground. Together with a colleague from Dept. of Sociology I have been asked to evaluate the system: he investigates the attitudes towards research ethics and how they change, I evaluate the system as a work tool. Our reports will be the basis for decisions about the system by the University management.

Keywords: Ethics, information systems, university, evaluation

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I am currently participating in a project at the University of Oslo aimed at introducing an extension of the publication registration system, which supports research ethics. The current system allows researchers to register their publications, and administrators to count them. The number of publications is the basis for a part of the funding to the University and internally in the University.

A couple of scandals concerned with fake data and fake co-authorship have triggered a wish to bring the ethical awareness more to the foreground. A few extensions of the publication registration system has been made:

- 1) a research ethical claim to be made by each researcher
- 2) a reference to the Vancouver rules concerning co-authorship for each publication
- 3) a reference to licenses for collecting and storing data
- 4) an upload of the data to a locked archive.

This system is currently being tested by pilot users at the University of Oslo. Together with a colleague from Dept. of Sociology I have been asked to evaluate the system: he investigates the attitudes towards research ethics and how they change, I evaluate the system as a work tool. Our reports will be the basis for decisions about the system by the University management.

A MODEST INTERVENTION

The intervention I do is relatively modest: if I document bad design so that the work tool work against management goals, management may wish to change parts of the design. If I cannot document any unwanted consequences at management level, the pilot system may be introduced in the organization. My role and my power to intervene are very small; it stays in the documentation and analysis of cause-and-effect relations of bad design with bad user behavior.

Intervention is defined¹ as to come in or between points of time or events by way of hindrance or modification, 'to involve oneself in a situation so as to alter or hinder an action or development'. Intervention means change, and change requires power: the ability to act or produce an effect, or possession of control, authority, or influence of others.

CONDITIONS FOR INTERVENTION

I find myself in a position I share with many (maybe most) systems developers:

- there already is a system. It is old and most people don't like it but have to use it
- the socio-technical infrastructure is deep and impossible to change. The system fits with and enforces particular behaviors
- the system is used by many different user groups, for many different purposes – some almost conflicting
- the management wants the employees (researchers) to change behavior and attitudes towards unethical behavior

¹ www.webster.com

- the administrative system opens up for many possibilities for control and automation of administrative tasks.

Being positioned within such a limited space for action is particularly interesting for a participatory design researcher, and very much closer to real life system development conditions in which participatory design should work. In my case the power is not shared between the interest groups, and all the users can do if they do not want to use the system is to work around it or try to exploit its weaknesses in ways that does not have unwanted consequences for them².

WHOSE SIDE ARE YOU ON?

An interesting aspect of the task is that the project goal is all good: researchers should behave ethically sound. Some researchers agree to this, and find it unproblematic to use. Others find it insulting to be suspected for unethical behavior, and do not want to use the system at all.

There are, however, more interest groups influencing the system. The administration wants to count what can be counted and develop a number of systems of measurements that can be integrated into the system, e.g. the long list of journals and publication outlets, ranked and differentiated into A and B journals. This makes it easy to automate the calculation of points and to compare researchers and research groups.

There are good and bad sides with the system, obviously – and maybe it is impossible to avoid the bad sides ... The question is whether the researcher (me) is also an interest group here, with different interest, like finding bad designs or finding bad behaviors. The participatory design researcher wants to voice the users' interests. The paid evaluator should be loyal to the task given. Whose side am I on? How do I behave ethically sound and show my bias?

THE LARGER PICTURE

There are several interesting topics to discuss in this project, including 'power' and 'participation'.

One obvious set of concepts is responsibility and accountability. Intervention and participatory design is about being accountable for the design choices we make (Suchman 2002). Designers should be accountable for their design solutions even though they cannot be responsible for the uses of those solutions. We cannot predict user behavior but we can be sure that users will behave differently and use even the same system in amazingly different ways (see e.g. Bratteteig 2004). Unfortunately, most current designs aim to hide complexity and thus any traces of design choices due to the goal of making smooth, seducing and easy-to-like-and-purchase designs (Bratteteig 2007). Accountability for design choices would have been much more present if we were to show and reveal our choices rather than hiding them.

Another concept I would like to discuss is automation. The publication registration system aims to reduce the amount of work for the researcher in registering his or her publications. The registering is extra work: it is done for the administration and you do because you have to. The system includes some automatic features, like producing a web page based on your project description. When you have entered data: your publication title, abstract, co-authors, collaborators affiliations etc. the system can generate various lists for you and your administrator. It seems that the system suggests more administration but at the same time automates some of that administration (see also Bratteteig 1998). System functionality offered just because it is easy to build is not good design.

² a classic study is Gasser (1986)

My last comment is to the idea that the goal of changing attitudes and behavior in matters of research ethics can be achieved through system design. I am quite critical to the idea that a system can be used to enforce attitude change even through forced behavior. It would imply designing a very rigid control mechanism – which is an idea I do not like even if the goal is good. My view is that attitudes also need to be conceptually understood, not just operationally. Ethical behavior in research is intertwined with professional questions of epistemology and relevance (Kalleberg forthcoming 2009).

THE LARGER PICTURE

Intervention through the evaluation of the publication registration system opens up for many questions that concern my work as a researcher as well as my discipline: practices of participatory design and systems development. A discussion about the context and conditions for participatory design reminds me that the context of research and the context of design practice are very different (Bjerknes & Bratteteig 1987), and that research should aim to address this difference.

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